



Course Syllabus

COURSE NUMBER: MTHC5280.01	COURSE TITLE Calculus for Teachers	TERM: Fall 2008
SITE: 50	INSTRUCTOR CONTACT INFORMATION: Craig Hannick (314) 956-7999 hannick@sluh.org	CREDIT HOURS: 3

1. COURSE DESCRIPTION:

This course covers topics in Differential and Integral Calculus, specifically those on the AP Calculus syllabus. In addition to the mathematical content of the course, methods of teaching Calculus will be discussed. Calculators will be utilized (TI-83/84 Plus) as a problem-solving tool.

2. LEARNING OUTCOMES: (Insert course outcomes and their links to program outcomes, relevant goals, dispositions, and MoSTEP/Professional Organization standards. Rows and columns may be added or deleted using the Microsoft Word Table Tool).

Course Outcomes	Program Goals	SoE Goals, SoE Dispositions, and MoSTEP/Prof Standards Addressed
The students will enhance their knowledge and understanding of Calculus concepts		
The students will utilize graphing calculator technology as a problem-solving tool		
The students will increase their ability to discuss mathematical ideas with peers and students		

3. Schedule of required readings, class preparations and assignments, lectures, discussions, student presentations, out-of-class assignments and exams.

August 26, 2008	Introduction
September 2, 2008	Functions
September 9, 2008	Derivatives
September 16, 2008	More Derivatives
September 23, 2008	Applications of Derivatives
September 30, 2008	EXAM I
October 7, 2008	
October 14, 2008	
October 28 2008	
November 4, 2008	
November 11, 2008	EXAM II
November 18, 2008	
November 25, 2008	
December 2, 2008	
December 9, 2008	
December 16, 2008	EXAM III

4. RESOURCES:

Required Text(s):

Calculus by James Stewart, 5th Edition.

5. EVALUATION: (basis of evaluation with explanation regarding the nature of the assignment and the percentage of the grade assigned to each item below)

Assessments	Links to Course Outcomes	Percentage of Grade
Exams		100%

6. GRADING SCALE:

90% - 100%	A
80% - 90%	B
70% - 80%	C
below 70	NC

Note: ALL PAPERS/PROJECTS MAY BE RETURNED VIA A SELF-ADDRESSED, STAMPED ENVELOPE. PAPERS ARE NOT AVAILABLE FOR PICK-UP IN THE SoE OFFICE.

ACADEMIC HONESTY POLICY

Students at Webster University are expected to practice academic honesty.

Avoiding Plagiarism

Plagiarism is intentionally claiming that another person's work is his/her own or implying that another person's work is his/her own (through inadequate or inaccurate citations of reference material.)

Students:

- Should not copy whole portions of text from another source as a major component of papers or projects.
- Should identify the title, author, page number/webpage address, and publication date of works when directly quoting small portions of texts, articles, interviews, or websites.
- Should appropriately identify the source of information when paraphrasing (restating) ideas from texts, interviews, articles, or websites.
- Should follow the guidelines of the American Psychological Association Style Guide when referencing all research sources.

Consequences of Academic Dishonesty:

For further information about the consequences of academic dishonesty please consult the Webster University Student Handbook.

ACCESSIBILITY/ACCOMMODATIONS POLICY

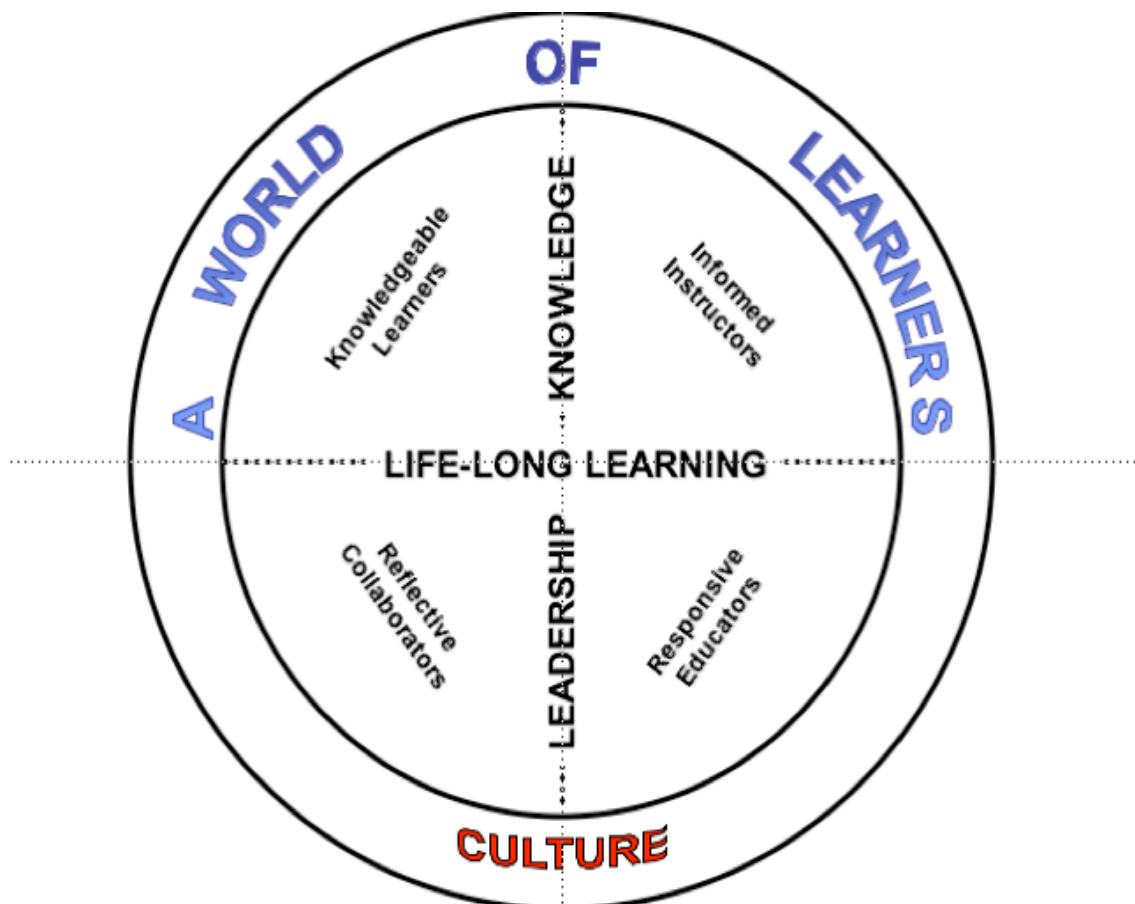
If you have a disability that may have some impact on your work in this class and for which you may require accommodations contact the Director of the Academic Resource Center, Dr. Pat McLeese, at (314) 968-7495.

**Webster University
School of Education**

Vision: “. . . We all must work to make this world worthy of its children.” (Casals, 1970)

Mission: The School of Education at Webster University provides its students with the knowledge, experiences, and practical tools that help them guide both themselves and others toward lifelong learning. The School of Education is a community of educator-scholars who apply critical reflections and creative energies to enhance learning in schools and other educational settings. The faculty strives to support this community by modeling effective teaching practices based on sound theory and research. Personalized approaches create a challenging, yet supportive environment that permits the risk-taking necessary for learning and growth. The School of Education encourages its faculty and students to work actively toward this end, keeping in mind that action must be rooted in visionary, yet realistic, thinking. This thought and action process underscores the development of an inner-directed self-understanding, an outer-directed global perspective, and an appreciation of human diversity that arises from both.

Theme: Developing a world of learners through knowledge, leadership, and life-long learning.



The universal mandala (a circle with intersecting vertical and horizontal lines) graphically represents the conceptual framework of the School of Education. The outer circle provides the framework for a “world of learners” in cultural settings. The two axes represent the theme components of knowledge, leadership, and life-long learning. These lines are broken to emphasize the fluid relationship of the goals and integrated concepts. Each quadrant represents one of the school’s four goals for its candidates: to develop knowledgeable learners, informed instructors, reflective collaborators, and responsive educators.

School of Education Goals

1. Education candidates will demonstrate knowledge of the subject matter, knowledge of the learner, and knowledge of pedagogy based on inquiry and scholarship.

The knowledgeable learner:

- 1.1 knows content that supports conceptual understanding;
 - 1.2 applies tools of inquiry to construct meaningful learning experiences;
 - 1.3 identifies developmental factors in student learning; and
 - 1.4 understands theoretical principles of effective instruction to plan learning experiences.
2. Education candidates will incorporate multiple assessment and instructional strategies to support effective educational practices based on research and theory.

The informed instructor:

- 2.1 designs curriculum based on students' prior knowledge, learning styles, strengths, and needs;
 - 2.2 understands and uses a range of instructional strategies;
 - 2.3 uses a variety of communication modes, media, and technology to support student learning; and
 - 2.4 employs a variety of formal and informal assessments to monitor learning and modify instruction.
3. Education candidates will reflect on the roles educators take as leaders of change through collaboration with colleagues, students, and families in schools and communities.

The reflective collaborator:

- 3.1 values and integrates reflection to grow as a professional;
 - 3.2 promotes communication and collaboration with colleagues, families, and community leaders;
 - 3.3 seeks relationships with families and students to support student learning; and
 - 3.4 initiates change that benefits students and their families.
4. Education candidates will demonstrate respect for diversity through responsive teaching and learning that values individual differences.

The responsive educator:

- 4.1 understands and responds appropriately to issues of diversity
- 4.2 acknowledges social and cultural contexts to create effective teaching and learning environments;
- 4.3 adapts instruction to the learner's knowledge, ability, and background experience; and
- 4.4 identifies resources for specialized services when needed.

School of Education Dispositions

NCATE defines dispositions as “the values, commitments and professional ethics that influence behaviors toward students, families, colleagues, and communities and affect student learning, motivation, and development as well as the educator’s own professional growth. “ (Professional Standards, p. 53) There is significant value in focusing attention on qualities that make an effective teacher.

1. Understands and Respects Self
 - 1.1 Understands and respects that s (he) may be different from others
 - 1.2 Embraces an openness to change (adaptability, flexibility)
 - 1.3 Exhibits curiosity
 - 1.4 Engages in reflection
2. Understands and Respects Others
 - 2.1 Understands, respects, and responds appropriately to diversity in a variety of settings
 - 2.2 Exhibits empathy
 - 2.3 Commits to fairness and honesty
 - 2.4 Listens respectfully to other points of view

3. Understands and Respects Professional Communities
 - 3.1 Commits to professional behavior in university and school cultures
 - 3.2 Practices informed decision-making in university and school cultures
 - 3.3 Communicates and collaborates in university and school cultures
 - 3.4 Accepts academic rigor (willingness to work/ high expectations)
 - 3.5 Affects change with courage and confidence